

# KNOWLEDGE

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## MORE THAN A GOOD IDEA



ARMY STRONG

## COMMUNICATION: A TWO-WAY STREET

In my last column, I promised to talk about messaging and how we can effectively convey the safety message to our Soldiers. I've pondered that a lot since then, and I'd like to share some thoughts with you now. Keep in mind I don't have a perfect solution for everyone, but this can at least serve as a conversation starter — after all, it's about communication!

First, and perhaps most importantly, neither I nor many of you talk the way Soldiers communicate with one another today. That's not a slam on anyone's age, it's just a fact. We're older, and instead of relating to young Soldiers as peers, we might come across as parental. Numerous men and women in our ranks are just a few short months or years removed from their Family homes, and they often view this communication style as equal parts frustrating and condescending. Obviously, that's not effective.

This is already a rules-based Army, and if you ask random young privates on the street what safety is about, they'll probably describe the pains of reflective belts and boring safety briefs. One idea to help us move past that mindset is to start utilizing the "great communicators" in our formations. You know who they are: the unofficial leaders of a platoon or battle buddy group. They know how to talk and make people listen; we need them to buy into and convey the safety message for us. They can be invaluable assets, but we have to let them have a role and voice first.

We must also frame our messages in a way that resonates within the ranks. Soldiers talking to Soldiers is the best method for actually communicating the message, but formulating what's to be said is a little more nuanced. Soldiers need to understand safety isn't just personal, that it's also part of the big picture of operational readiness. The trick is getting the individual Soldier to understand that by doing his or her part in thinking through risk and applying mitigation strategies, whether for on- or off-duty activities, they impact unit readiness. Soldiers aren't just a number filling a needed slot; our people make this Army great, and everyone, regardless of rank, plays an important part in the organization. We need to make them feel needed and necessary, because the simple fact is, they are.

The communication issue is one we've been trying to solve for many years, not just in safety but in all important areas in our Army. There isn't a perfect answer, and we shouldn't waste time chasing a magic bullet that doesn't exist. The art of communication is constantly evolving, and with the science of technology, it's changing faster than ever. I couldn't imagine text speak as a young twenty-something, just as many Soldiers today can't imagine party lines or rotary phones. But we ought to take the opportunity to learn from one another to determine the best means of communicating the critical message of safety as a personal and unit readiness imperative, i.e., a combat multiplier.

As leaders, we all acknowledge safety is relevant in everything we do. Getting Soldiers to understand that is the challenging part, and if nothing else, I hope I've given you some ideas to think about. With spring already here and summer just around the corner, we need to start communicating our messages now. Ask your Soldiers what they think and take their answers seriously. Communication can be effective only if it's two way.

Enjoy these first days of spring, and remember, to really play hard, we must always play it safe.

**Army Safe is Army Strong!**

**TIMOTHY J. EDENS**  
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## MORE THAN A GOOD IDEA

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It seems like Soldiers are mandated to attend thousands of safety briefings a year. Don't drink and drive. Don't go out without a plan. Wear your personal protective equipment. Don't speed. Each briefing resembles the last, and before one even begins, the elevator music starts playing in my head.

The task of keeping our troops safe is daunting. And the task of passing concern and ownership of safety from safety officers to Soldiers (a group that engages in relatively unsafe behavior as an occupation) is almost impossible. I believe what we need is something that makes safety real.

Soldiers believe we are immune to "Murphy." Those ankle biters that catch up with the average Joe don't apply to us because we are better than that. Helmets are for people who crash, not us. Super-fantastic safety yellow is a fashion statement for a third-grade teacher, not a borderline superhuman. In reality, we lose more Soldiers due to oversights in our own safety than to enemy gunfire. Although many of us know that to be true, it still doesn't change our perceptions about personal safety.

If the "I-won't-get-hurt-because-I-won't-allow-it-to-happen" mentality sounds familiar, keep reading. I was that type of person. It took an event out of my control to change my mind. I hope after reading this that you, too, will be persuaded to consider doing some of the little things that can make a big difference in your safety.

It was July 1, 2004, and I was a bright-eyed, bushy-tailed private on my first deployment. Back then, I was a 15T (Black Hawk mechanic) assigned to C/10 AVN. We had entered Iraq in the latter parts of 2003, and after moving between Anaconda, Tikrit and Mosul, my part of the task force settled in at Q-West. I was qualified on more weapons than I knew the Army even had. Depending on the day, I could be doing scheduled maintenance on an aircraft or pulling security on a convoy running supplies up and down Main Supply Route 1.

All in all, I enjoyed getting outside the wire. The sights and sounds I saw while traveling around Iraq aren't something one sees on a normal day in the U.S. Then, on a seemingly ordinary day, I learned that safety is more than a good idea.

We were running resupplies to a small retrans site between Mosul and Q-West, just off of MSR 1. I was on the back of a two-seat up-armored HMMWV. This wasn't one of the fancy enclosed two-seaters, but the kind where the back was open to the world. In the back of the HMMWV, my unit had welded a mount for an M249 with a small shield of steel on the front and a ratchet strap that would retain the poor soul (me) clinging to the SAW from being thrown from the vehicle.

Up to this point, the trip had been uneventful. My vehicle, which was fourth in line, was to stop at the point where the convoy departed the road and pull security with two other vehicles until the resupply mission was complete. As we left the road to turn around, our HMMWV followed the tire tracks of the vehicles ahead of us, which was the TTP at the time. Unfortunately, that would work against us on this day.

Under the sand, insurgents had stacked four anti-tank mines on top of one another, waiting for something to set off their pressure triggers. Two HMMWVs, a Light Medium Tactical Vehicle and my truck's front-right tire all made it over the mines. Then BOOM!

You know in the movies how Tom Cruise or some other action star sees the explosion coming and has time to run to the edge of a bridge or roof and jump to safety? Well, I can tell you with certainty that it's not like that in real life. Anyone who has had the unfortunate experience of being involved in an explosion knows that it happens so much faster than your brain can process. Even though time really does seem to slow down, it still doesn't allow for the cognitive process to take place and manifest into a physical reaction.

My HMMWV was lifted from the ground, turned almost 180 degrees and then brutally slammed back to earth. Miraculously, I was able to hang on to the SAW for my first "flight" in an Army vehicle. But as we reconnected with the ground, I was flung out the side of the truck, showing the inadequacy of the ratchet straps that were supposed to keep me in place. The chain retaining the chock blocks to the HMMWV wrapped around my leg and partially stopped my exit, leaving me hanging upside down off the side of the



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vehicle, my head dangling just above the sand. I remember my face feeling extremely wet and having the overwhelming need to spit. That is when I began to process what had just happened.

When I did spit, a mixture of blood and sand spewed from my mouth. I knew shrapnel had torn my face to shreds, leaving my lips looking much like the alien's mouth in the movie "Predator." As cliché as it sounds, as soon as I realized I still had all my fingers, my mind immediately turned to whether or not "I" was intact. Fortunately, I was still whole (believe me, you would check too). So there I was, hanging upside down with 50 pounds of gear on my back, waiting for the enemy to finish me off. Thankfully, the next person I saw was a battle buddy from the truck behind, who helped me down.

As the adrenaline wore off, my face pounded with every heart beat. I repeatedly asked my friend how bad it was, but he wouldn't tell me. My tenacity finally won out, though, and he began to describe the damage. To make a long story short, he said my face had basically been blown off. Given the extent of my injuries, I was surprised I could still see him so well. But there he was, clear as day, standing in front of me. How was I not blind? Well, the answer was simple. I had been wearing ballistic sunglasses.

To be perfectly honest, I didn't wear those sunglasses that day because of their ballistic protection properties. I wore them because it was bright outside. I just figured if I was going to wear sunglasses anyway, it might as well be a pair that were also ballistic resistant. They never found those sunglasses. They were disintegrated by the shrapnel — but only after serving the purpose for which they'd been designed.

After my surgeries in Mosul, I was flown to Germany and then back to the U.S. I had a two-by-four-inch hole in my arm, and the doctors were worried about infection. I asked them all if I could still apply for flight school. They told me I could, but I don't think any of them actually believed it. Understandably, none of them wanted to crush my dreams. Had I not been wearing those ballistic glasses, their doubts might have proved true. Fortunately, with time and a lot of hard work, I was able to classify for my Class I flight physical without waivers. I applied for and was accepted to Warrant Officer Candidate School with flight school to follow.

Looking back after nearly a decade, the decision I made that day not only saved my life, but also my future in the Army. The joy I have flying and the honor I have in serving my country would have taken a drastically different path had I not worn my PPE. But while things eventually worked out for me, this story will never have a truly happy ending. My truck commander took the majority of the impact that day and was killed, saving both me and my driver's life in the process. One reason I decided to write this article was to honor him. I hope his sacrifice will live on in other Soldiers' making good decisions. Remember, PPE saves lives — but only if you wear it.



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## DRIVING DOWN DISTRACTIONS

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Outside of combat (and Thanksgiving with the in-laws), few endeavors are as fraught with danger as driving. Each year, there are more than 30,000 traffic fatalities in America. It almost makes the run to Kabul look sane. And yet, every day we see people behind the wheel eating, texting, reading — doing just about anything but watching the road.

Ever heard of situational awareness? You know, it's what makes you take that second look at a pile of rocks along the convoy route or notice the locals suddenly disappearing from your foot patrol zone. Bring it back home and situational awareness is looking at the kid playing with his dog and wondering if he might rush out into the street. It's watching that car about to enter from a side street to see if the driver has looked your way and knows you're coming. Basically, it's staying alert for the hazards around you.

Some motorists rarely, if ever, practice situational awareness. I'm stationed in the Washington, D.C., area and dread my afternoon and weekend commutes. Here are a few examples of why.

I once witnessed an Army spouse (identified by the numerous "I ♥ MY SOLDIER" stickers on her vehicle) texting while operating in heavy traffic on Interstate 495. My wife and I watched as she got closer to the car ahead of her every time traffic stopped. When traffic suddenly halted after reaching about 30 mph, she panicked and threw her device against the windshield, trying to regain control of her vehicle. Fortunately, she stopped in time. The next time she passed us, she had both hands on the wheel.

One afternoon I noticed a Soldier having an animated conversation on his cellphone. He was using the cross-handed (right hand to left ear) method to hold the phone as we crept along Highway 1. When traffic stopped, he only missed hitting me by going onto the shoulder. He recovered his phone, gave me an annoyed look, pulled back onto the road and continued the same cross-handed cellphone conversation.

It's not just that distracted drivers disrupt the flow of traffic or using hand-held devices while driving on post is prohibited by regulation. The real issue is these drivers pose a dangerous threat to everyone else on the road. I once had to send my first sergeant and a platoon leader to the chapel where the wife of a staff sergeant worked. Their duty was to tell this young mother of three that her Soldier had gotten distracted on the road and wouldn't be coming home — ever. What about you? Is a phone call or text message worth your life?

Although it may be hard for many to believe, it is possible to drive without having a cellphone grafted to your ear. Instead, try using a little common sense. If you're giving someone a heads up that you're coming, call before you get on the road. It won't delay you that much and you'll improve your chances of actually arriving. Got an incoming text message? Wait until you can stop to send back a reply.

Summer is on its way, and many of us will be hitting the roads with family and friends for a well-deserved vacation. Just make sure you bring them — and yourself — back in one piece.

April is Distracted Driving Awareness Month, and the National Safety Council encourages motorists to take a pledge to drive cell-free.



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## GUT CHECK

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Six months out of flight school, I was assigned to a VIP/Lift unit flying UH-1Hs in Germany. Working hard to listen to my unit instructor pilots and taking any mission that would get me in the air, I quickly made the transition from wannabe to pilot in command. Lots of long days, willingness to sit for hours in the ops section waiting on a mission, working support and maintenance issues or flying as a co-pilot for a VIP flight had put me on the fast track to success. I had even gone so far as to be trained as a single PC, pretty heady stuff for a newbie and something I thought I could handle with ease.

My commander was a former CW3 AH-1 Cobra pilot who was a veteran of Vietnam, as were the majority of the unit's instructor pilots. He had received a direct commission to lieutenant and moved up the ranks to major. As the unit commander, he insisted on flying with every new instructor and PC, which I took as a commitment to ensure the quality of his unit personnel.

I had been given the day's mission personally by the commander. The unit had a field training exercise coming up in support of an air assault battalion and this was to be a field site reconnaissance to ensure the site would be adequate for deployment of the personnel and aircraft. The commander and I would fly to the site — I as the PC and he as my co-pilot — recon it, refuel, have lunch at a nearby air base and return. It seemed like an easy flight and a good way for me to get some face time with the "old man." It would also knock out his process of flying with the "new guy." All in all, I looked forward to the flight and showing him what I could do. I was one of the more mature guys in the unit and extremely confident in my abilities to handle any situation that presented itself.

It was a typical spring day in Germany, and my flight planning weather reflected the same. We would have early morning fog burning off later in the flight and eventually becoming a scattered layer with plenty of visibility. My pre-mission planning completed and aircraft pre-flight accomplished, I waited at the aircraft for the commander to appear. I would do the flying and he was to be my navigator, keeper of the map and assume co-pilot duties as necessary.

When he arrived, I gave him a comprehensive brief, cranked the aircraft and proceeded according to his guidance in the direction of the field site. I asked him to accomplish a fuel check once we climbed to our cruise altitude of 1,000 feet above ground level. The site was due north and outside of our regular operating area, but I recognized some familiar terrain features and towns and became comfortable with our position.

The commander was doing a pretty good job of navigating, and I was making our requisite radio calls and at ease with the flight. After about 20 minutes, I realized the fog was rising and becoming a thick, overcast layer below us with very few sucker holes to descend through. Still confident with our position, I quickly noted our heading and asked the commander to jot it down. I then asked for the fuel check numbers. He glanced at me with a glazed-over look, as if I had asked him for some kind of answer to an abstract calculus problem.

As the fog continued to rise, I adjusted our altitude to maintain a manageable separation level over the layer and started to think about what Army Regulation 95-1 said about over-the-top flight. It seemed as if we had been over the top for about 10 minutes, so I quickly started my clock, knowing I didn't have much longer to maintain this position.

About this time, I was shocked to see the commander no longer following our position on the map at a rate commensurate with our speed over the ground. Instead he was busy trying to peer through the fog layer to see if he could find our field site. He said he thought it was around there somewhere. At this point he told me, "I have the controls," and threw me the map. He started to circle the area in a right descending turn over the spot he thought might be the location without any solid view of the ground.

I started to get a little flustered and put out over the turn of events. I had the map but no idea of where we were. He then straightened out the aircraft and started to fly 90 degrees from our original heading. As I vainly tried to figure out our position over the ground, I began to feel a sinking feeling in my stomach and got a coppery taste in my mouth. The commander said that he knew the site was "around here somewhere" and insisted that we fly around until we could find a hole to descend through and get a look at the terrain. At this point, I'd had quite enough. I announced that I was taking the controls and getting us "the hell out of here."



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I thought to myself, "Well, that was a short career," but I was determined to get us out of this rapidly declining situation. I flew a reciprocal heading back to where I thought he had made the 90 degree course correction and then picked up another reciprocal of our original heading. I also tuned in a nondirectional beacon to an airfield that we had passed some time back.

After about 30 minutes, I started to pick up a familiar landmark through the lessening foggy ground cover and flew a direct course for our home base. It was a chilly and silent flight back to base, but I was determined to defend my actions, if needed.

After we landed, the commander assisted with the post-flight. All he said was, "Well, guess I'll try to get out there tomorrow." I never heard anymore about it and never discussed the flight with anyone until many months later after he had left command.

I made many stupid rookie errors during the flight. I should have been on the map and let my co-pilot fly. I also should have done the fuel check and thought about over-the-top flight as part of the planning process. I eventually did what the "gut check" dictated and got us out of a bad situation.

What if I had been less persistent with my insistence to terminate the mission or had been a younger pilot afraid to question the commander's wishes? Don't give in to command peer pressure. You may have to answer for it later. Make the big boy decisions and stick to them. It will buy you another day and flight.



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## DEADLY CONSEQUENCES

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Unit leaders face difficult decisions during combat conditions that sometimes force them to alter established orders and operating procedures. However, simulated combat scenarios, such as those that occur during training exercises, should not be an excuse to ignore technical manual instructions. Doing so could have deadly consequences, like what occurred in the incident described below.

The Marines departed their release point about 10 a.m. While en route to their first checkpoint, the convoy suffered a simulated improvised explosive device attack. In accordance with the rules of the exercise, the IED disabled a Medium Tactical Vehicle Replacement, so the Marines attached it to another MTRV in the convoy. The Marines from the disabled MTRV moved to the troop compartment of the towing vehicle, and the convoy continued on its route until they reached a 30-35 percent grade with a slight left turn.

As the vehicles descended the grade, the towed MTRV gained speed. The operator applied the brakes to the towing MTRV; however, the inter-vehicular airlines were not attached, which prevented him from slowing the towed vehicle. The mishap MTRV driver pumped the brakes in an effort to slow the vehicles' descent. This caused a variation of momentum between the two vehicles, increasing the inability to maintain control.

The towing MTRV skidded slightly to the right toward an embankment as the towed vehicle continued on a straight path, which caused both to jackknife. The towing vehicle, having the most momentum, began a driver-side-to-passenger-side roll, eventually landing upside down on the embankment, killing one Marine and injuring four others in the troop compartment.

So how did this accident occur? Unfortunately, the Marines who attached the tow bar to the disabled vehicle failed to attach the MTRV inter-vehicular airlines and safety chains between the two, which was a common practice in Iraq. Some Marines in Iraq adopted a towing method where the tow bar was initially attached to the front towing shackles of MTRVs and HMMWVs and then fastened to the hood of the vehicle using cargo straps. This allowed for quick recovery procedures because the disabled vehicle only had to unfasten the cargo straps, connect to another vehicle's pintle hook and continue on its route.

However, the MTRV tow bar technical manual requires that the inter-vehicular airlines and safety chains be used during all towing operations. Without the inter-vehicular airlines, the MTRV can't brake evenly across all six axles of the towing and towed vehicles. Without this braking ability, momentum can cause the towed vehicle to speed past the towing vehicle and flip both. If the tow bar connection were to break, the safety chains are the final failsafe to ensure the coupled vehicles stay together. Unlike the 5-ton vehicle, the MTRV tow bar is a separate table of equipment item with its own SL-3. Unit leaders must ensure all SL-3 items for the tow bar are on hand for operations.

Furthermore, the operator committed two errors that contributed to this mishap. The post-mishap investigation indicated that the mishap vehicle was being operated in the Highway 0-2 central tire inflation system terrain setting rather than the required Cross-Country CTIS setting. The Cross-Country CTIS setting would have provided the operator with more traction and perhaps lessened the possibility of the vehicle losing control. Future convoy commanders must consider the type of terrain they will traverse and include CTIS settings in the convoy checklist.

The operator also made post-mishap statements that he focused his attention on the scenario-driven events happening in front of his vehicle rather than on the towed vehicle. This momentary loss of situational awareness led the operator to attempt to travel the decline at too great of a speed. Operators involved in towing operations need to understand the impact that a towed vehicle has on their maneuverability. It is recommended that all motor transport operators receive training on towing procedures with practical application that allows Marines to experience the difficulties involved in towing operations.

Towing presents a challenge for unit leaders and individual operators. Both need to be aware of the convoy speed, tow bar SL-3 and CTIS settings during all movements. Failure to follow the technical manual creates the possibility for mishaps such as this one.





## WHEN NATURE CALLS

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It was just after noon on a beautiful Saturday, and I was bored. Looking to get out of the house, I called a few riding buddies and asked if they wanted to enjoy the sun on our bikes. Of course, they were up for it, so we linked up and took off on what would be an all-day ride through the upstate New York countryside.

We left Watertown about 1 p.m. and headed south in search of roads untraveled. We'd been riding for hours when the lead rider spotted a parking lot barbeque and decided this was a good place to pull over and enjoy some dinner. After the grub, we checked the map and decided we would go a little farther and then make the turn back toward home. Unfortunately, we got lost and ended up in a small town just north of Albany, so we stopped at a local bar to ask for directions.

Some bikers at the bar told us the road out front would take us where we wanted to go, but we should be careful because it had plenty of switchback turns and could be dangerous. We thanked them for their help and headed out for home. Just as the bikers had said, the road home was very curvy (and fun to ride, without a doubt). I had been riding in the first position for a while, but one of the other guys was riding a smaller bike, so I decided to move to the third position to ensure our spacing was better since it was getting late and the sun was setting. This would be a decision I'd later regret.

As we rode through the curves, everything seemed great until a deer suddenly darted from the side of the road and right into my bike. The collision caused my front wheel to jerk to the right. I attempted to swerve and keep the bike upright, but the gravel on the small, two-lane mountain road caused me to lose control and head straight toward a guardrail.

I realized I had two options: go over the top or lay down the bike and jump for safety. I chose the latter. As I attempted to clear the bike, my engine guards — which are designed to protect the bike from damage during an accident — caught the guardrail. As my bike flipped upward, it caught my leg, breaking it in several places.

I was lucky. Because I was wearing all the proper personal protective equipment that day, my injuries were limited to a broken leg and clavicle. While there is no substitute for good PPE, it cannot and will not replace practice and experience. I recommend every rider — no matter how experienced — take a Motorcycle Safety Foundation course to brush up on their riding techniques. When nature calls, you'll be thankful that you've done everything possible to keep yourself protected.

## FYI

### SHARING THE ROAD

Deer are unpredictable. Here are some tips from [motorcyclecruiser.com](http://motorcyclecruiser.com) to help you avoid a collision on the open road.

- Deer travel in groups. One deer means there probably are more, so slow down immediately even if the one you see is off the road and running away.
- Heed deer crossing signs, particularly in the seasons and times of day when deer are active. Slow down, use your high beams and cover the brakes.
- The Wisconsin Department of Transportation says deer collisions peak in October and November, with a smaller peak in May and June. Such crashes between April and August are most likely to occur between 8 p.m. and midnight. Between November and January, 5 p.m. to 10 p.m. is the danger time.
- Additional good, powerful driving lights are worth their weight in gold on a deserted road at night. Alternatively, fit a headlamp with a 100-watt high beam.
- Noise — a horn, revving your engine, etc. — might drive deer away.



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- Flashing your headlights can break the spell that seems to cause deer to freeze.
- Don't challenge large animals by approaching them. A buffalo, moose, elk, mountain lion, bear or large deer might attack to drive you off. Stay back and consider turning and riding farther away.
- Stay away from an injured animal. It might attack or injure you unintentionally if it comes to and tries to escape.
- Don't swerve if a collision appears imminent. Braking hard right up to the point of impact is good, but you want to be stabilized if you do collide, which will give you the greatest chance of remaining upright.
- Spread out if riding in a group. This pattern will keep a rider who hits a deer from taking down other riders with him.
- Wear protective gear. As with other crashes, no one plans to hit an animal. The only way to be ready when it happens is to be ready on every ride.

### Did You Know?

According to the Insurance Institute for Highway Safety, more than 1.5 million deer-vehicle accidents occur annually in the United States, killing about 150 people and causing at least \$1 billion in vehicle damage. Motorcycle riders account for about half of the deaths in vehicle-animal crashes despite the fact that cars, trucks and SUVs outnumber motorcycles on the road 40 to 1.



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## SECONDS COUNT

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As a pilot, I know that helicopters have vibrations. Heck, every vehicle has vibrations — some good, some bad. In an aircraft, there is the shudder of effective translational lift; the wind hitting your tail rotor just so, causing a bit of a shake; and the rotors just a “little” out of balance, causing another vibration. We all have experienced vibrations, some that trigger a little voice in the back of our minds, saying, “What the heck is that?” The point is you have to be able to determine if you should continue the mission, return to base or, in our case, just land!

The Fourth of July is my favorite day of the year. In 2009, I was lucky enough to find myself in Jalalabad, Afghanistan. Even luckier (I thought), I was going to fly and hopefully get an opportunity to find some bad guys. Little did I know that about an hour after I took off on my flight, my fellow pilot and I would be standing next to our destroyed aircraft.

The seconds you take when deciding what to do can be the difference between a normal landing and a very forced landing. Evaluating each situation using risk management can be an easy, common-sense process. However, it can also be an immediate necessity to determine the risk of continuing or calling it a day right there and then. A bad feeling in the pit of your stomach is also something you have to take into account (relying on your experience level).

If a situation doesn't feel right, it very likely isn't, and that can be incorporated into the RM process as well. Experience is what gives us the ability to weigh probability and severity and determine a course of action for whatever risk level we come up with. Principally, the step of continuous evaluation is where you focus during a mission. The hazards for the mission profile will have been identified before takeoff.

For us, this was an emergency procedure. Every pilot knows it can happen; therefore, we train for EPs so we can respond instinctively. For this particular emergency, I knew the procedure. However, we had never before felt the vibration we did that day. I knew it was a drivetrain component, but my first guess was something to do with the tail rotor. I never guessed that it would be my main driveshaft that was in the process of failing, as I had no indications in the cockpit for such a case.

So now we come to the continuous evaluation aspect. In hindsight, deciding to land 30 seconds earlier would have been a great idea. Evaluating a vibration that neither of us had felt before, and the ‘vibe’ in the pit of both our stomachs saying, “This is not good,” did not take long. Immediately, we turned back toward the airfield, which, thankfully, was only about 10 miles away.

It was the seconds from when the vibration got worse to when the decision was made to land that counted — just a few seconds too late to get a Broken Wing Award. Instead, what we got for a Fourth of July present was a Class A accident in an Afghani farmer's field.

Hindsight is 20/20, as the saying goes. My point is when something is wrong, seriously without-a-doubt wrong, and the pit of your stomach — combined with your experience — is telling you it's wrong, seconds count to make your decision.



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## OUT OF DARKNESS

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The city of Tucson, Ariz., rests in a valley surrounded by four separate mountain ranges. I've spent the better part of my adult life exploring those ranges, inside and out. One of my favorite activities is caving. It's as easy or difficult as you want to make it, and you generally have to drive quite a while to find a cave, so there aren't a lot of crowds when you get there.

In the spring of 2005, while looking for a new cave to explore, I lucked upon a locked cavern that was far enough into the Santa Rita Mountains that you had to take a sturdy off-road vehicle to get there. The ranger station maintained the keys at its office in the city. I thought this would be the perfect cave to explore with my two friends, George and David, who were in Tucson for their initial flight training with the Air Force.

I signed out the key from the ranger station on a Thursday. The rangers had a four-day weekend, so I wouldn't be returning the key until their office opened again the following Tuesday. I normally told people when I was going caving, although it was usually just for conversation or bragging purposes rather than safety reasons. This time, however, I didn't do that. George and David hadn't told anyone else where they were going either. That was our first mistake.

When we reached the cave, it was night. At this point, I discovered that neither of my companions had headlamps, although one of them had brought a flashlight. They also failed to bring food and water. Unfortunately, I had made certain assumptions about their preparation based on their military experience and wild stories. I had also made assumptions based on what I believed was common sense. In my cave pack, I'd brought two extra headlamps and a flashlight. I also had two bottles of water and some munchies. We decided we wouldn't stay in the cave long enough to need anything other than what I'd brought. Besides, we'd driven a few hours to get to this place. We didn't want to drive back, failing in our mission to explore a new cave.

The rangers had told me this cave required ropes beyond a certain point. I didn't know my friends' skill levels, and none of us really wanted to lug the extra gear, so we decided we would not go beyond that point. We dropped into the cavern and, after about an hour of crawling around and admiring Mother Nature, called it a night.

We had gone over a few short ledges to get to an area where we could view an underground lake. The lake sat below another 10-foot ledge. On our way back out, George lost his footing and slipped off the ledge into the lake below, taking one headlamp and the cave pack with him. The headlamp and flashlight in the cave pack were now non-operational, and the food and water were contaminated. To make matters worse, by the time we got George out of the water, we were all soaked.

As we started to make our way back out, nothing looked right. We were lost. We kept coming back to the lake but could not find the path to the entrance. After another hour of futile searching, a second headlamp went out. We were now down to one light source. I turned off the remaining lamp to conserve it. We were all pretty exhausted. As it turned out, George had been up for 36 hours straight. As soon as we stopped to rest, he passed out. As we sat there, the cold set in.

The darkness was very disorienting, even while we were seated. By this point we had been in the cave for five hours. The cave temperature is always 71 F, and it had never occurred to me that a person could get hypothermia in that temperature. We were definitely starting to feel the effects, and, combined with the absolute darkness, David and I were bordering on hallucinating. We knew we needed to get out of there soon, so we woke up George and continued our search for the entrance.

After another hour, our last light source started to fade. We stopped immediately. The cave had many chasms, ledges and bodies of water, so trying to make our way in the dark was not an option. We were in a locked cave, so nobody would just happen to come exploring while we were there. And because we were in a remote area of the Santa Ritas, even our attempts to yell for help would be lost on the outside world. The only people who knew we were in the cave were the rangers, and they wouldn't come looking for us until 24 hours after we failed to return the keys. By then, six days would have passed. We had no food and water, a dying light source and our clothes were soaking wet.

After a couple of days, we accepted the fact that we were going to die in that cave. But some bodily functions continue without regard to impending doom. I couldn't hold it in any longer, so I took our sketchy headlamp to a place a short distance from the guys so I could relieve myself. As soon as I dropped my pants, I felt a very light breeze. I excitedly called George and David over, and we followed the breeze to the entrance. Because we'd been in the dark for so long, the sunlight was incredibly painful. But



that didn't matter because we were alive!

I think the lessons to be learned from this experience are obvious, but I also believed that certain caving preparations were obvious, so I will list them anyway.

- Bring three light sources per person when you go caving. If you encounter trouble as we did, at least you'll have extra light.
- Know the abilities and limitations of your companions. Had we known George had been awake for so long, we probably wouldn't have gone that day.
- Bring enough liquid and sustenance to get you through at least a day of isolation. It doesn't have to be much. Beef jerky and power bars would have made a huge difference in our physical states.
- Finally, always tell someone where you are going and when you plan to return. That way, if you don't come back, they'll know when and where to start looking for you.



ARMY STRONG.



## NO DO-OVERS

LT. COL. BEN BRADLEY

Joint Forces Headquarters-Florida  
St. Augustine, Fla.

In late 1992, a young staff sergeant named Johnson died in a motorcycle accident. He had owned the motorcycle only four days. If we knew then what we know today, could this Soldier's death have been prevented?

Johnson joined the National Guard unit I was in shortly after he left active duty. We worked together in the S-2 office, and through the short time I knew him, he impressed me with his knowledge and leadership abilities. He was an excellent NCO who had everything going for him. A Desert Storm veteran, Johnson was married, enrolled in college and had a good job on the side. He was enjoying life and had a bright future. All of that would change in a matter of days.

One Friday night during a drill weekend, Johnson mentioned he had bought a motorcycle two days prior. He was truly excited about the purchase and wanted to bring it in the following day for all of us to see. The next day, as we were looking at the motorcycle, he mentioned how fast it would go. This alarmed me. I remember telling him it was a cool bike, but to please be careful on it. And that was it. That was all I said or did.

A day later, Johnson was dead. He had been traveling home from drill on a two-lane road and was in the process of passing a car when another vehicle pulled onto the road in front of him. Johnson collided with the car and was thrown from the motorcycle. He initially survived the accident, but died from his injuries shortly afterward. It was a tragic loss for his family, as well as the Army.

So, is there anything we could have done differently back then to prevent this accident? Honestly, I don't know. I can't attribute the accident to a poor safety culture. The unit we belonged to had a strong safety program and good leadership. I feel like we were well trained in the safety programs and hazards that were known at that time. I don't recall an emphasis being placed on motorcycle safety as it is today. Regardless, if I remember correctly, Johnson was wearing a helmet and estimated to be traveling only slightly above the speed limit, so I don't think anyone would say he was riding recklessly.

As for me, did I fail by not doing more? When I look back, I certainly wish things would have turned out differently and that I could have done something to prevent the accident. But I think I reacted in the way I was trained for that period. Let me explain. The Army Safety Program has changed since 1992. I believe that we, as an organization, now do a much better job identifying hazards and developing controls than we did back then. The technology afforded to us today through computers and the Internet allows the Army to capture accident data, track trends, disseminate accident data and develop controls much better than we did in 1992. For example, we all know today that accidents involving motorcycles are a leading cause of off-duty deaths of Soldiers.

Nowadays, we also have better safety training, such as the Motorcycle Safety Foundation's Basic RiderCourse, as well as Motorcycle Mentorship Programs. These programs were developed for a reason. Additionally, changes to regulations that make MSF training and PPE mandatory for riders both make a difference in keeping Soldiers safe. The Army deserves kudos for looking for trends, developing controls and implementing risk management programs.

If we could go back to that day in 1992 with all the knowledge and programs we have today, Johnson might still be alive. Somewhere through the process of completing all of the mandatory training and safety briefings, he may have become a better rider. We will never know.

As for me, I think I am better today at recognizing hazards through risk management training. I would definitely do things differently if I could go back in time. Unfortunately, neither Johnson nor I will have a chance to do things over.



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## JUST SAY NO

CHIEF WARRANT OFFICER 2 MICHAEL KELLY  
6th Battalion, 101st General Support Aviation Brigade  
Fort Campbell, Ky.

*Author's note: The following event took place during my recent deployment to RC South in Kandahar, Afghanistan. It taught me a valuable lesson about complacency and fatigue.*

In August 2010, I was the pilot in command of a CH-47F, accompanied by a UH-60 for a general support mission in the local area of operation. The day started out normally with the regular preflight, permission brief and crew brief on a mission to conduct general support to local forward operating bases that included supplies and personal. The mission and duty day were scheduled for about 12 hours for duty and six hours of flight time.

About 4:30 p.m., we were approaching our duty day and flight time limit; however, we still had not completed the last leg of our mission. I radioed the tactical operations center and requested a duty-day and one-hour flight extension so we could complete the mission. Upon completion of the last leg, we returned to Kandahar Airfield. Upon arriving, the TOC radioed and told us to standby for a follow-on mission. I explained we were already operating on a duty-day and flight extension, which they acknowledged that they were fully aware of.

The follow-on mission was to transport 30 personnel and their gear to a FOB about seven miles northwest of Kandahar Airfield. The Soldiers had been stuck at Kandahar for more than a week due to weather, so I agreed to take the mission. Shortly after takeoff, I made contact with the landing zone and reported we were inbound for landing from the east. The controller requested we land on a 090 heading. I replied, "Roger 090." I then proceeded to the north and started an approach from the west to land 090.

The FOB was small and on the side of a mountain. It had a very small LZ in a bowl in the hillside. In Kandahar, the winds are generally from the west, and this day was no different (winds 280/8). When the controller made the request for 090, I thought for a moment that the landing direction was 275, but disregarded the thought after looking at the clock and saying, "Man, it's been a long day."

As we approached the LZ, I began to notice the reason the controller wanted us to approach from the west. The already confined LZ was even more confined because of several vehicles parked on it. As I continued the approach, I noticed a large tower that had been erected since the last time I had landed there. This tower had not been reported and was another reason for the request to land to the east. At this point, I had seen three different red flags and twice thought about aborting the landing. However, I was tired and ready to complete the mission, so I continued on.

The approach was going fine until about 150 feet, when turbulence and a strong updraft violently disrupted the aircraft. With the tower at my direct left front and the mountain on my right front, a go-around was not an option. The helicopter nose pitched up and then immediately down, and the aircraft began a rapid descent toward the ground. I remember telling the crew to hold on because we were going to hit hard. The helicopter finally stabilized at about 30 feet. I landed and checked on the crew and then off-loaded the passengers and supplies.

My co-pilot and left-door gunner were shaken up by the event. I had my flight engineer check the outside of the helicopter and asked if everyone was OK to return to KAF. In about 10 minutes, we were ready to depart. Once at KAF, I debriefed the TOC and spoke with our battalion TACOPs, explaining what had happened. I told him the details of the LZ at that FOB. I also filled out the close-call database report.

This incident could have very easily ended differently and with deadly consequences. I allowed myself to let complacency and fatigue interfere with my decision-making process. Already on a duty-day and flight extension, I accepted a follow-on mission, thinking it would be quick and easy. By doing this, I found myself disregarding red flags that posed a great threat to me and my crew. I placed everyone on the aircraft in a situation that had unnecessary risk. Because I was tired, I found myself in a "let's-just-get-it-done" mindset.



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# KNOWLEDGE

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

This incident taught me that although I was trying to help, sometimes you just have to say no. We know ourselves better than anyone, and when we are tired, we often make mistakes we wouldn't normally make. In this instance, I would not have landed had that been my first stop of the day. But because it was my last stop, I did land. I am thankful my crew and passengers are safe and will use this lesson for the rest of my career.



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U.S. ARMY COMBAT READINESS/SAFETY CENTER



## THE HARD WAY

NAME WITHHELD BY REQUEST

Working around large factory equipment is inherently dangerous. Mix in losing situational awareness and you have an accident waiting to happen. Here's my story.

I was working nine-hour shifts six days a week in a stifling paper processing plant, manipulating 600-pound rolls onto large, dangerous industrial machinery. Doing my job well and fast meant that those who used what I processed could do their jobs. The work was arduous, and at the end of most days I would sleep 10 to 12 hours.

On this particular day, I'd only been at work for an hour and a half. I hadn't had my usual couple cups of coffee, so I wasn't awake as I normally might have been. (This was during a time when some scientists or health industry people said coffee was bad for us, which led me to switch to tea. Apparently, tea isn't as good as coffee at keeping us alert.) My first break was coming up, but I first wanted to check a fan belt on one of the machines. It had been squeaking a lot over the past few months and needed to be tightened regularly.

I turned off the machine, went to the toolbox to get a wrench and then walked to the area where the fan belt was located. I thought everything had finished winding down and didn't hear or see anything on my walk toward the fan belt to suggest it was still spinning. I knew I should move two inches to the left so I could see the sandpaper rougher roll inside the machine that was turned by the fan belt, but for some reason, I just didn't do that. So there I was, wanting to do the best job I could while not at my 100 percent best.

I reached in to test the tautness of the belt with my left ring and middle fingers, like one would do when working on a car. To my surprise, I found the belt hadn't finished winding down! In fact, it was still going fast enough to pull my fingers with it. The belt was tight enough on the pulley to cut through the bone of the first joint of my ring finger and lacerate the top tendon of my middle finger.

Unfortunately, the doctor said the joint couldn't be reattached due to the lack of bone left, so I now have a stubby ring finger. The nerves that went to the tip of my finger are now bundled into an annoying ball inside the second portion of my finger. Had I just moved two inches to the left before checking the fan belt I might still have my finger and could have continued playing bass guitar at a professional level. Instead, I feel like a complete idiot.

To this day, I don't know why I didn't fully check to see whether the fan belt had wound down before sticking my fingers in harm's way. Talk about learning a lesson the hard way! There is one consolation, though. The plant has since instituted safety measures to protect others from similar injuries. The fan belt guard has been fully reworked so the operator has to take considerable time to get it off before being able to touch any portion of the mechanism. The rest of the plant has also been reworked to provide more safety to the employees. While I'm happy others won't have to go through a similar ordeal, I wish it didn't come at the expense of my finger.



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## LOST IN ALABAMA

DAVID BECKER

The thought of getting lost in your home country with GPS and cellphone technology readily available may seem far-fetched and ridiculous. I'm here with real-world experience to tell you that it is indeed possible — and could happen to you.

There I was, a new CP-12 intern in Alabama for the first time in my life. After taking about a week to get acclimated at Fort Rucker, I slowly began venturing out to nearby towns. Dothan and Enterprise were both close and offered several restaurant and entertainment options, and navigation to both cities was fairly easy. As I became more comfortable navigating the area, I decided to venture a little farther to see what else Alabama had to offer. Never did I expect what happened next.

It was a Saturday night, and I was wrapping up what had seemed like an endless amount of CP-12 homework. I needed a break, so I left the solitude of my hotel room to recon the area. I wasn't really paying attention to where I was going because I knew I had my GPS to guide me home. What could go wrong?

I passed through a few more small towns with nothing of real interest before stopping at a locally owned restaurant for dinner. By the time I finished, it was dark, but I decided to continue my expedition. I didn't think to ask the people at the restaurant what town I was in because I didn't care. After all, I had my GPS.

After about another hour of driving up and down back roads that seemed to lead to nowhere, I decided it was time to head back to the hotel. I turned on my GPS and waited for it guide me back to civilization. Much to my surprise, the GPS didn't know where I was either. At this point, though, I wasn't terribly concerned. As a former service member, I'd navigated out of places worse than this. No problem, right? Wrong!

After hours of trying to retrace my path, I was even more lost than before. In addition, I was also running low on gas because I didn't bother to fill the tank before I left. It was nearly 11 p.m., so everything in sight was closed. (I use the term "in sight" loosely because the streets I was on had no lighting and patches of fog were developing.) It was at this point that it finally hit me that I was in trouble. I hadn't told anyone where I was going. In fact, no one even knew I'd left. To make matters worse, I was now having trouble getting a cellphone signal.

It was about midnight before I got a signal strong enough to call my wife in Texas so she could Google the area and help me get back to the hotel. (I had to call her because, like most of the other interns, I'd shoved the contact numbers the instructors gave us the first day of class in a folder and forgot about them.) I finally made it back to Daleville about 1 a.m. with only fumes left in my gas tank.

I tell this incredibly embarrassing story in hopes that others can learn from my mistakes. I should've never left the hotel that evening without a plan. My overconfidence in my abilities led to a potentially dangerous situation. I also should have told an instructor or classmate what I intended to do that night and ensured I had their contact numbers handy in case of an emergency. Additionally, a map of the area would have come in handy when my expedition took me off the highway and onto rural back roads. Had I completed a Travel Risk Planning System, or TRIPS, risk assessment on the U.S. Army Combat Readiness/Safety Center website (<https://safety.army.mil/>), the maps would have been created for me and ready to print. It also would have been a good idea to top off my gas tank before I left post to explore an unfamiliar area.

Probably the worst thing I did that night was rely too heavily on my GPS. I was so confident that it would guide me home from anywhere that I failed to pay attention to where I was actually going. When I finally realized I was lost, I made the situation worse by trying to backtrack with only my rusty navigation skills and memory to guide me. I hate to think of what could've happened had I not regained cellphone service or I'd run out of gas in that unpopulated area.

Since that night, I don't take even the smallest trip for granted. It only takes a couple minutes to step back, do a quick risk assessment and develop and implement simple controls that could mean the difference between a leisurely drive and a nail-biting adventure.



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## SO MANY GADGETS, SO MUCH DISTRACTION

CHIEF WARRANT OFFICER 4 JAY BOURGEOIS

Most of my flying for the past 30 years as a reservist and civilian pilot has been under visual meteorological conditions. Therefore, I am accustomed to flying with most of my attention focused outside the cockpit. The civilian flight department I work for supports workers in the oil fields in the Gulf of Mexico. Flying in the Gulf is not too much different from flying helicopters in other places, except for the traffic congestion that occasionally comes into play — and all the water.

Most pilots look at the Gulf as a big emergency landing area since the helicopters are equipped with emergency floats that will support the aircraft in the water. But, when the seas are too high, it is not such a comforting prospect to ditch. In 2010, three helicopters were forced to land in the Gulf; however, all three were landed well enough so as not to be classified as an accident by the Federal Aviation Administration. (Two had power issues and one a tail-rotor issue.)

Several years ago, my company purchased new aircraft to replace our older twin-engine helicopters. The new aircraft were technologically advanced and equipped with numerous computers. The instrument panel has all the gadgets we dream of as pilots. This gear includes auto-pilot, dual VOR receivers, dual GPS receivers, weather radar and a SkyWatch traffic avoidance system that sounds a warning when another aircraft is within one-half mile. The new rides are also certified for single-pilot instrument flight rules flight. After flying for so many years in VFR aircraft without much instrumentation, these new aircraft were a welcome change. But they were still a change.

I have read in the FAA's Airman's Information Manual how to scan for other aircraft: dividing attention between looking at the instrument panel and scanning outside for traffic. I have read about what's called empty field myopia, how to not just stare, but to focus on something as you scan. I have always tried in the past to think about these things as I am flying, looking for traffic. It had become my standing procedure every day. On hazier days, I would reference the artificial horizon more often, but still keep my traffic scan going.

The new aircraft have more items inside that can suck your attention. The company has us still flying VFR, but plans to eventually get us into a single-pilot IFR program. So, occasionally we will fly an approach in VFR conditions as we return to base at the end of the day. The auto-pilot does it all; we just have to program the machine.

One day not long ago, I was flying out-bound, doing a crew change. I had climbed to a higher altitude since it was a clear day, the visibility was excellent and the winds were good. I had programmed the auto-pilot for a descent to our platform and was just playing with the electronics and relying on the SkyWatch system to alert me of any traffic, as I have been doing more and more since I have all these new gadgets to play with. You know what happens next.

My front-seat passenger and I hear, "TRAFFIC! TRAFFIC!" (It was the SkyWatch system telling me, "Look outside, stupid!") We looked up to see a good, close view of a Sikorsky S-92 (a very large helicopter) pass over us. The S-92 was north-bound at 3,000 feet since they usually fly IFR. We missed each other by about 750 feet. It was mostly the fact that we came close without my seeing him that got to me. I still gladly fly our new helicopters, but I have re-doubled my efforts to not get so distracted with all the new toys. Now, I just look outside more!



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## ACCIDENT BRIEFS

### AVIATION

#### HH-60L

##### Class A

The aircraft was damaged when it struck the wing of a parked privately owned plane while ground taxiing. The aircraft was shut down without further incident.

#### KA 300

##### Class A

All crewmembers were killed when the aircraft crashed 1.8 nautical miles from the runway.

#### MH-60M

##### Class A

One crewmember was killed and another injured when their aircraft struck the ground during routine advanced traffic management training.

### UAS

#### MQ-1C

##### Class A

The system sustained internal structural damage to the brake area and possibly the payload bracket assembly when it touched down hard during a Tactical Automated Landing System approach to the runway.

### GROUND

#### PERSONNEL INJURY

##### Class A

A Soldier died when he fell over the railing of his fourth-floor hotel room balcony.

#### FIRE AND EXPLOSIVE

##### Class A

A Soldier was killed, another suffered the amputation of his leg and possibly his hand, and another received massive injuries to his face when a 155 mm HE round detonated while in the breach of a M777A2. Five other Soldiers suffered minor injuries. The accident is under investigation.

### DRIVING

#### PMV-4

##### Class A

A Soldier was killed when his vehicle was struck head-on by a hydroplaning vehicle that crossed the centerline. The Soldier was wearing his seat belt.

A Soldier died after she was struck by a vehicle as she walked along a road with another Soldier.

#### PMV-2

##### Class A

A Soldier died when his motorcycle collided with a civilian-operated truck.



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